CERN School of Computing 2019

Sunday 15 September 2019 - Saturday 28 September 2019

Babeș-Bolyai University

Academic programme
The complete programme will offer more than 55 hours of lectures and hands-on exercises. The programme is organized over three distinct tracks: Physics Computing, Software Engineering, and Data Technologies.

**Physics Computing**

- **Introduction to Physics Computing**
  - by Arnulf Quadt (University of Göttingen)*
  - 2h lectures
- **Data Analysis**
  - by Ivica Puljak (University of Split)*
  - 4h lectures + 3h exercises
- **Machine Learning**
  - by Anna Scaife (University of Manchester)*
  - 3h lectures + 3h exercises
- **Data Science tools for interactive exploration**
  - by Bob Jacobsen (UC Berkeley)*
  - 1h lecture

**Software Engineering**

- **Software Design in the Many-Cores Era**
  - by Enric Tejedor (CERN) and Andrei Gheata (CERN)*
  - 4h lectures + 3h exercises
- **Tools and Techniques**
  - by Bob Jacobsen (UC Berkeley)*
  - 2h lectures + 5h exercises
- **Creating Secure Software**
  - by Sebastian Lopienski (CERN)*
  - 3h lectures + 3h exercises

**Data Technologies**

- **Data Management**
  - by Alberto Pace (CERN)*
  - 5h lectures
- **Data and Storage Technologies**
  - by Andreas J. Peters (CERN)*
  - 1h lecture + 4h exercises
- **Data Visualization**
  - by Eamonn Maguire (Pictet Asset Management)*
  - 2h lectures + 2h exercises
- **Networking Fundamentals**
  - by Francois Fluckiger (CERN)*
  - 2h lectures

**Additional lectures**

On top of the academic programme of the School, there are four guest lectures scheduled:

- **Computational Science - The Third Pillar of Science?**
  - by Emil Slusanschi (Politehnica University of Bucharest)*
- **Physics-inspired computer algorithms**
  - by Liliana Teodorescu (Brunel University)*
- **Using MPI and OpenMP in building High Performance Applications**
  - by Virginia Niculescu (University Babes-Bolyai)*
- **Industrial applications of data science**
  - by Cosmin Lazar (Bosch)*

There will be also a session of short student presentations. Finally, two special evening talks will be given by CSC lecturers:

- **When Internet history meets philosophy**
  - by Francois Fluckiger (CERN)*
- **Future of the Universe and of Humanity**
*by Ivica Puljak (University of Split)*